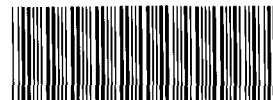


2C210

RE 5-10-95

**Technical Review of EG&G Document
"Proposed Closure Strategy for OU 7"**



000063561

**SAIC/Environmental Restoration
Comments and Recommendations to Environmental Restoration RFFO
4/20/95**

General Comment:

1. There are numerous references to Colorado and federal regulations in this document. The federal references for RCRA should be changed to the state regulations, and the state regulations should be correctly referenced. (Examples: Page 3 - 40 CFR Part 261 should be 6 CCR 1007-3, Part 261); Figure 1 - 6 CCR Part 260.10 and 8 CCR Part 261.31 should be 6 CCR 1007-3, 261.10 and 6 CCR 1007-3, 261.31)
2. The Tables present maximum concentration data, or maximum concentrations which exceed ARARs. This data would be much more convincing and informative if the numbers of samples collected, the range of results, and the ARARs against which the numbers have been compared were also presented. If the numbers of samples collected are too small for statistical analysis then the maximum results must be presented. If there are sufficient numbers of samples, the 95% upper confidence limit would be a better choice.

Specific Comments:

Section 1.1, page 1:

Reference a figure that shows the location of IHIS 114, 203, 167.2, and 167.3.

Section 1.1, page 1, paragraph 2:

What is the "process improvement proposal for OU 7"? The document should be referenced in the text of the section.

Section 1.3, Page 3, paragraph one:

Since the definition provided for F039 leachate in 6 CCR 1007-3, Part 261 refers to **land-disposed waste**, the references to **disposal of hazardous waste** should be replaced with **land-disposed hazardous waste**.

Section 1, Page 4, Figure 1:

This figure should be replaced with the updated version prepared by EG&G. The updated version differentiates between new spills and leaks of hazardous waste which are cleaned up within a specified time period and ones which have been left in place past that specified time period, thereby meeting the definition of land-disposal.

ADMIN RECCRD

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Section 2, page 8:

Why is it stated that "measures to control landfill leachate, affected groundwater at the perimeter of the landfill, and/or upgradient groundwater that is causing saturation of the landfill mass may be implemented as part of the presumptive remedy." These measures are described in the Proposed Closure Strategy section. is there reason to doubt that they will be implemented?

Section 2.1.1, page 8, paragraph two:

The RCRA waste code, F039, for leachate was not in existence until June 3, 1990, therefore, F039 contained in ground water could not have been draining from the landfill in 1973. All references to F039 contained in waste being present prior to the 1990 date, ground water or otherwise, should be deleted from the document.

Section 2.1.3, Page 11,:

The first paragraph refers to a composite cover and the second paragraph refers to a single-barrier cover. This is confusing and should be clarified.

Section 2.3.2, Page 14, paragraph one:

The third sentence refers to uncontaminated plutonium molds being found near the asbestos pit. Since the molds are only solid waste, and referring to plutonium only clouds the discussion, this sentence should be deleted.

Section 2.4.2, page 16-17:

The methods used to arrive at the landfill gas investigation results are not clear. Paragraph three states that EPA Level II field instruments were used to measure total combustible gases, methane, non-methane organic compounds (NMOC) and carbon dioxide. Paragraph five states that concentrations on non-methane organic compounds were determined by subtracting methane concentrations from total combustible gas concentrations. These statements appear to be in conflict with one another.

There seems to be sufficient data available to determine if venting of landfill gases will require an air discharge permit, if discharged gases will require thermal destruction and if existing gas venting wells can continue to be used. Paragraph five estimates total NMOC emissions from the landfill to range from 1 Mg/yr to 54 Mg/yr. Paragraph two discussed measured gas pressures and measured gas flow rates. Paragraph six discusses *in situ* gas sampling results. This data has not been pulled together sufficiently to address closure issues. The proposed closure strategy states that emissions from the burners will be monitored to evaluate the need for additional gas controls. The need for any controls, beyond those existing now, needs to be determined.

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Section 2.4.3, Page 17:

This section describes the existing gas-venting wells and proposes to leave them in place, while elsewhere, justification has been provided to close the ground water monitoring wells within the landfill, to eliminate compromising the cap. Presumably, the gas-venting wells will not penetrate the cap, but will feed into the passive gas-venting system. This should be clarified.

Section 2.5.1, Page 18:

See the comment on Section 2.1.1, paragraph two, above.

Section 2.5.2, Page 18, paragraph one and two:

All references to F039 contained in ground water within the landfill should be deleted. The text should only refer to ground water in the landfill. F039 should be applied when the ground water leaves the landfill.

Page 21, Table 1:

This table does not appear to be referenced in the text.

Section 2.5.3, Page 22, paragraph two:

The landfill is regulated by Colorado as a RCRA landfill, as it operated as a hazardous waste landfill from 1980 to 1987. All RCRA requirements for delisting must be met, unless Colorado agrees to reduce those requirements. These actions cannot be taken as just CERCLA actions.

Section 2.6.1, page 22-23, paragraph one:

This paragraph does not clearly describe the groundwater intercept system. Is the "slurry wall groundwater intercept system" as described in the Figure 8 Explanation equal to the "Groundwater Intercept System" or does it also include the "(perforated) and (non perforated)" locations? The text states that the "system is a clay barrier (not a slurry wall) on the outside wall of the leachate collection trench" but there is no reference to a leachate collection trench on Figure 8. For clarity, figure 8, figure 9 and the text need to be coordinated.

Section 2.6.2, page 24, paragraph one:

It is stated that "Approximately... 400 ft of the trench along the southwest side are not keyed into bedrock and, therefore, do not effectively intercept groundwater." This statement does not agree with Appendix C (page C-1, paragraph 3) which stated that the wells on the south side of the landfill are dry in the area where the intercept system is not keyed into the weathered bedrock and asserts that the groundwater intercept system is working on the south side.

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Section 2.6.2, page 24, paragraph three:

It is stated "the water balance shows that both a cap and a slurry wall on the north side of the landfill would prevent additional leachate generation." this statement appears to be misleading. The addition of a cap and slurry wall on the north side were not modeled; and therefore, it can not be stated that additional leachate generation would be prevented. Based on the discussion in Appendix C, it appears that only the current conditions were modeled which demonstrated the ineffectiveness of the groundwater intercept system on the north side.

Section 2.6.3, page 26, paragraph two:

A figure is needed to show the location of the proposed slurry wall. Also, justification should be given for the selection of the slurry wall length.

Section 2.7.3:

Will the ditch be lined?

Section 3, page 28:

The meaning of this paragraph is not clear.

Section 3.1.1, page 28, paragraph one:

See the comment on Section 2.1.1, paragraph two, above.

Section 3.1.3, page 31, second paragraph (on page):

See the comment on Section 2.5.3, page 22, paragraph two, above.

Appendix A:

In the RCRA MCLs column, replace 40 CFR with 6 CCR 1007-3. Units are not indicated for most of the ARARs.

Appendix C:

Not enough data are presented to evaluate the representativeness of the modeling effort. In addition to the information presented, tables should be included that present the modeling input parameters for each layer, the boundary conditions, and the modeling assumptions. Also, a figure should be added that shows the cells with numbered rows and columns to relate to Table C-1.

REVIEW COMMENT SHEET

Time Spent on Review: _____ hrs.

Return to:

If questions on content, please call the SME:

Name _____ Ext. _____ Location _____ Name _____ Ext. _____ Title _____
 DOE Support _____ Proposed Closure Strategy for OU7, Draft Report, April 13, 1995
 Page 1 of 5

Please review the attached procedure:			Proposed Closure Strategy for OU7, Draft Report, April 13, 1995		
Comment Due Date: _____			Title _____		
<input type="checkbox"/> Internal Review <input type="checkbox"/> Parallel Review <input type="checkbox"/> Verification <input type="checkbox"/> Validation <input type="checkbox"/> Revalidation			General (G) comments require resolution but do not require resolution acceptance. Mandatory (M) comments require resolution and resolution acceptance. 1-A03-PPG-004 provides complete definitions of General and Mandatory comments.		
TYPE G or M	PAGE	SECTION OR LINE #	COMMENT	DISPOSITION	Disposition Accepted INIT/DATE
			General comments: 1. There are numerous references to Colorado and federal regulations in this document. The federal references for RCRA should be changed to the state regulations and the state regulations should be correctly referenced. (Examples: Page 3 - 40 CFR Part 261 should be 6 CCR 1007-3, Part 261); Figure 1 - 6 CCR Part 260.10 and 8 CCR Part 261.31 should be 6 CCR 1007-3, 261.10 and 6 CCR 1007-3, 261.31). 2. The Tables present maximum concentration data, or maximum concentrations which exceed ARARs. This data would be much more convincing and informative if the numbers of samples collected, the range of results, and the eARARs against which the numbers have been compared were also presented. If the numbers of samples collected are too small for statistical analysis, then the maximum results must be presented. If there are sufficient numbers of samples, the 95% upper confidence limit would be a better choice.		
1		1.1	Reference a figure that shows the location of IHIS 114, 203, 167.2, and 167.3 (Figure 3)		
1		1.1	Para. 2. What is the "process improvement proposal for OU7"? The document should be referenced in the text of the section. (Referenced already).		
3		1.3	Para. 1. Since the definition provided for FO39 leachate in 6 CCR 1007-3, Part 261 refers to land-disposed waste. The references to disposal of hazardous waste should be replaced with land-disposed hazardous waste.		
POC/Reviewer: (Comments not signed by POC/Reviewer will be considered unofficial and not subject to resolution) <input type="checkbox"/> No Comments <input type="checkbox"/> This procedure revision has no impact or relevance to our discipline or organization and we waive need to concur.			Resolutions Accepted Initials _____ Date _____		
DOE Support Name _____ Signature _____ Ext./Pager/Fax _____ Bldg./Dept./AGM _____ Date _____					

NOTE: These reviews are completed by qualified reviewers in accordance with 1-A03-PPG-004 in concert with 1-A01-PPG-001 and 1-A02-PPG-003.

RF-47947 (5/93)

REVIEW COMMENT SHEET (continued)

Page 2 of 5

Review comments for document: Proposed Closure Strategy for Operable Unit Seven, Draft Report, April 13, 1995				
Number				
TYPE G or M	PAGE	SECTION OR LINE #	COMMENT	DISPOSITION
	4	Sec 1 Fig. 1	This figure should be replaced with the updated version prepared by EG&G. The updated version differentiates between new spills and leaks of hazardous waste which are cleaned up within a specified time period and ones which have been left in place past that specified time period, thereby meeting the definition of land-disposal.	
	8	2	Why is it stated that "measures to control landfill leachate, affected groundwater at the perimeter of the landfill, and/or upgradient groundwater that is causing saturation of the landfill mass <u>may be</u> implemented as part of the presumptive remedy." These measures are described in the Proposed Closure strategy section. Is there reason to doubt that they will be implemented?	
	8	2.1.1	Para. 2. The RCRA waste code, FO39, for leachate was not in existence until June 3, 1990, therefore, FO39 contained in groundwater could not have been draining from the landfill in 1973. All references to FO39 contained in waste being present prior to the 1990 date, groundwater or otherwise, should be deleted from the document.	
	11	2.1.3	The first paragraph refers to a composite cover and the second paragraph refers to a single-barrier cover. This is confusing and should be clarified.	
	14	2.3.2	Para. 1. The third sentence refers to uncontaminated plutonium molds being found near the asbestos pit. Since the molds are the only solid waste, a and referring to plutonium only clouds the discussion, this sentence should be deleted.	
	16-17	2.4.2	The methods used to arrive at the landfill gas investigation results are not clear. Para 3 states that EPA Level II field instruments were used to measure total combustible gases, methane, non-methane organic compounds (NMOC) and carbon dioxide. Para. 5 states that concentrations on non-methane organic compounds were determined by subtracting methane concentrations from total combustible gas concentrations.	
POC/Reviewer: (Comments not signed by the POC/Reviewer will be considered as unofficial comments)				Resolutions Accepted
DOE Support				Initials _____ Date _____

RF-47947A (5/93)

REVIEW COMMENT SHEET (continued)

Page 4 of 5

Review comments for document: _____ Proposed Closure Strategy for Operable Unit Seven, Draft Report April 13, 1995				
			Rev.	Draft
TYPE G or M	PAGE	SECTION OR LINE #	COMMENT	Disposition Accepted INIT/DATE
	22-23	2.6.1	This paragraph does not clearly describe the groundwater intercept system. Is the "slurry wall groundwater intercept system" as described in the Figure 8 Explanation equal to the "Groundwater Intercept System" or does it also include the "(perforated) and (non-perforated)" locations? The text states that the "system is clay barrier (not a slurry wall) on the outside wall of the leachate collection trench" but there is no reference to a leachate collection trench on Figure 8. For clarity, figure 8, figure 9 and the text need to be coordinated.	
	24	2.6.2	It is stated that "Approximately . . . 400 ft of the trench along the southwest side are not keyed into bedrock and, therefore, do not effectively intercept groundwater." This statement does not agree with Appendix C (page C-1, para. 3), which stated that the wells on the south side of the landfill are dry in the area where the intercept system is not keyed into the weathered bedrock and asserts that the groundwater intercept system is working on the south side.	
	26	2.6.2	Para. 2. A figure is needed to show the location of the proposed slurry wall. Also, justification should be given for the selection of the slurry wall length.	
		2.7.3	Will the ditch be lined?	
	28	3	The meaning of this paragraph is not clear.	
	28	3.1.1	See the comment on Section 2.1.1, para. 2, above.	
	31	3.1.3	Para. 2. See the comment on Section 2.5.3., page 22, para. 2, above.	
	Appendix	A	In the RCRA MCLs column, replace 40 CFR with 6 CCR 1007-3. Units are not indicated for most of the ARARs.	
POC/Reviewer: (Comments not signed by the POC/Reviewer will be considered as unofficial comments)				Resolutions Accepted
DOE Support _____ Name _____ Signature _____ Date _____				Initials _____ Date _____

REVIEW COMMENT SHEET (continued)

Page 5 of 5

Review comments for document: _____				Number	Rev.	Draft
TYPE G or M	PAGE	SECTION OR LINE #	COMMENT	DISPOSITION	Disposition Accepted INIT/DATE	
	Appendix	C	Not enough data are presented to evaluate the representativeness of the modeling effort. In addition to the information presented, tables should be included that present the modeling input parameters for each layer, the boundary conditions, and the modeling assumptions. Also, a figure should be added that shows the cells with numbered rows and columns to relate to Table C-1.			
<p>POC/Reviewer: (Comments not signed by the POC/Reviewer will be considered as unofficial comments)</p> <p>DOE Support _____</p> <p>Name _____ Signature _____ Date _____</p> <p>Initials _____ Date _____</p>				Resolutions Accepted		

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